

## MULTIPLEX FLOW IMMUNOASSAYS PREFERABLY WITH MAGNETIC PARTICLES AS SOLID PHASE

### ABSTRACT OF THE DISCLOSURE

Heterogeneous assays for different analytes in a single biological sample  
5 are performed simultaneously in a multiplexed assay that combines flow cytometry with  
the use of magnetic particles as the solid phase and yields an individual result for each  
analyte. The particles are distinguishable from each other by characteristics that permit  
them to be differentiated into groups, each group carrying an assay reagent bonded to the  
particle surface that is distinct from the assay reagents of particles in other groups. The  
10 magnetic particles facilitate separation of the solid and liquid phases, permitting the  
assays to be performed by automated equipment. Assays are also disclosed for the  
simultaneous detection of antibodies of different classes and a common antigen  
specificity or of a common class and different antigen specificities. Each type is  
accomplished by immunological binding at the surfaces of two distinct solid phases in a  
15 sequential manner with dissociation of the binding and washing of the solid phase in  
between the binding steps.

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